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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,063

03/11/2004

Yoshinari Takayama

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09/25/2006

EXAMINER

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WASHINGTON, DC 20037

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,063

Applicant(s)

TAKAYAMA ET AL.

Examiner

Christopher P. Bruenjes

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) 5-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 5-9 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
2. The original invention and the invention of newly submitted claims 5-9 are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as forming a polyimide followed by molding the fully formed polyimide into a tubular object.
3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Art Unit: 1772

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 5-9 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima et al (USPN 5,411,779).

Regarding claim 1, Nakajima et al anticipate a fixing belt (see abstract) comprising a tubular object made of a polyimide resin and at least one functional layer superposed thereon (see abstract and col.3, 1.13-15). Note the limitation "the tubular object is molded by applying a polyimide precursor to a tubular mold, defoaming the precursor by centrifugal force, and then converting the precursor into an imide" is a process limitation

Art Unit: 1772

in an article claim and therefore receives little patentable weight. Articles are defined by structural limitations and process limitations are only given weight insofar as the structural limitations that those process limitations provide. In this case, the structural limitations provided by the process limitation include a tubular object that is molded from polyimide. Nakajima et al teach that the tubular object is molded by applying a polyimide precursor to a tubular mold and then converting the precursor into an imide (col.8, 1.8-38). The fixing belt inherently has a buckling strength of 40N or higher and a tear strength of 0.2N or higher, because the belt is made from the same materials having the same thicknesses, and because the fixing belt is used in the same manner and would require the same buckling and tear strength values in order to perform its function. Furthermore, Applicant's specification states that the thickness of the polyimide resin object is the most influential factor determining the buckling strength (see applicant's specification p.5). Nakajima et al teach the same thickness for the polyimide resin object so it is inherent that the buckling strength would be the same.

Regarding claim 2, the functional layer is a fluororesin release layer (see abstract and col.4, 1.1-8). Regarding claim 3, the tubular object has a thickness of 10 to 150 micrometers

Art Unit: 1772

and the functional layer has a thickness of 1 to 20 micrometers (col.7, 1.65 - col.8, 1.2), which overlap the claimed ranges.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Schlueter, Jr. et al (USPN 6,201,945).

Regarding claim 1, Schlueter, Jr. et al anticipate a fixing belt comprising a tubular object made of a polyimide resin and at least one functional layer superposed thereon (col.5, 1.1-5). Note the limitation "the tubular object is molded by applying a polyimide precursor to a tubular mold, defoaming the precursor by centrifugal force, and then converting the precursor into an imide" is a process limitation in an article claim and therefore receives little patentable weight. Articles are defined by structural limitations and process limitations are only given weight insofar as the structural limitations that those process limitations provide. In this case, the structural limitations provided by the process limitation include a tubular object that is molded from polyimide. Schlueter, Jr. et al teach that the tubular object is molded by applying a polyimide precursor to a tubular mold and then converting the precursor into an imide (col.9, 1.17-47). The fixing belt inherently has a buckling strength of 40N or higher and a tear strength of 0.2N or higher, because the belt is made from the same materials having the same

Art Unit: 1772

thicknesses, and because the fixing belt is used in the same manner and would require the same buckling and tear strength values in order to perform its function. Furthermore, Applicant's specification states that the thickness of the polyimide resin object is the most influential factor determining the buckling strength (see applicant's specification p.5). Schlueter, Jr. et al teach the same thickness for the polyimide resin object so it is inherent that the buckling strength would be the same.

Regarding claim 2, the functional layer is a fluororesin release layer or rubbery elastic layer such as silicone rubbers (col.9, 1.60 - col.10, 1.3). Regarding claim 3, the tubular object has a thickness of 25 to 150 micrometers (col.14, 1.43-46) and the functional layer has a thickness of 55 to 125 micrometers (col.15, 1.16-17), which overlap the claimed ranges.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al (USPN 5,532,056).

Regarding claim 1, Satoh et al anticipate a fixing belt (see abstract) comprising a tubular object made of a polyimide resin and at least one functional layer superposed thereon (see abstract and col.3, 1.18-20). Note the limitation "the tubular object is molded by applying a polyimide precursor to a tubular

Art Unit: 1772

mold, defoaming the precursor by centrifugal force, and then converting the precursor into an imide" is a process limitation in an article claim and therefore receives little patentable weight. Articles are defined by structural limitations and process limitations are only given weight insofar as the structural limitations that those process limitations provide. In this case, the structural limitations provided by the process limitation include a tubular object that is molded from polyimide. Satoh et al teach that the tubular object is molded polyimide (col.3, 1.18-20). The fixing belt inherently has a buckling strength of 40N or higher and a tear strength of 0.2N or higher, because the belt is made from the same materials having the same thicknesses, and because the fixing belt is used in the same manner and would require the same buckling and tear strength values in order to perform its function. Furthermore, Applicant's specification states that the thickness of the polyimide resin object is the most influential factor determining the buckling strength (see applicant's specification p.5). Satoh et al teach the same thickness for the polyimide resin object so it is inherent that the buckling strength would be the same.

Regarding claim 2, the functional layer is a fluororesin release layer or rubbery elastic layer such as fluorosilicone

Art Unit: 1772

rubber (see abstract and col.3, 1.26-27). Regarding claim 3, the tubular object has a thickness of 40 to 100 micrometers (col.3, 1.21-25) and the functional layer has a thickness of 20 to 500 micrometers (col.8, 1.42-45), which overlap the claimed ranges.

Response to Arguments

5. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-3 as anticipated by Nakajima et al have been fully considered but they are not persuasive.

In response to Applicant's argument that Nakajima fail to teach defoaming a polyimide precursor by centrifugal force, Examiner has already admitted that Nakajima fail to explicitly teach that method step in forming the article. However, as described previously articles are not defined by the process of making the article, but the structure of the article. Although method limitations are permissible in article claims, they are only given weight insofar as the structure that the method limitations provide. The Examiner has provided Nakajima as showing a product appearing to be substantially identical to the claimed invention, so the burden shifts to the applicant to shown an unobvious difference. See MPEP 2113. This can be shown by way of a declaration showing unexpected result

Art Unit: 1772

comparing the fixing belt made by the process taught by Schlueter and the fixing belt made using the defoaming step claimed.

In response to Applicant's argument that because Nakajima fails to explicitly teach the method limitations of the claimed invention, it is not shown that the buckling strength, and tear strength is inherently taught in Nakajima. Applicant's specification states that the thickness of the polyimide resin object is the most influential factor determining the buckling strength (see applicant's specification p.5). Therefore, since the fixing belt of Nakajima is formed of the same materials and has the same thickness it must provide the same properties of buckling strength and tear strength, unless the Applicant can show an unobvious difference. See MPEP 2112 V.

6. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-3 as anticipated by Schlueter et al have been fully considered but they are not persuasive.

In response to Applicant's argument that Schlueter fail to teach defoaming a polyimide precursor by centrifugal force, Examiner has already admitted that Schlueter fail to explicitly teach that method step in forming the article. However, as described previously articles are not defined by the process of

Art Unit: 1772

making the article, but the structure of the article. Although method limitations are permissible in article claims, they are only given weight insofar as the structure that the method limitations provide. The Examiner has provided Nakajima as showing a product appearing to be substantially identical to the claimed invention, so the burden shifts to the applicant to show an unobvious difference. See MPEP 2113. This can be shown by way of a declaration showing unexpected result comparing the fixing belt made by the process taught by Schlueter and the fixing belt made using the defoaming step claimed.

In response to Applicant's argument that because Schlueter fails to explicitly teach the method limitations of the claimed invention, it is not shown that the buckling strength, and tear strength is inherently taught in Schlueter. Applicant's specification states that the thickness of the polyimide resin object is the most influential factor determining the buckling strength (see applicant's specification p.5). Therefore, since the fixing belt of Schlueter is formed of the same materials and has the same thickness it must provide the same properties of buckling strength and tear strength, unless the Applicant can show an unobvious difference. See MPEP 2112 V.

Art Unit: 1772

7. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-3 as anticipated by Satoh et al have been fully considered but they are not persuasive.

In response to Applicant's argument that Satoh fail to teach defoaming a polyimide precursor by centrifugal force, Examiner has already admitted that Satoh fail to explicitly teach that method step in forming the article. However, as described previously articles are not defined by the process of making the article, but the structure of the article. Although method limitations are permissible in article claims, they are only given weight insofar as the structure that the method limitations provide. The Examiner has provided Nakajima as showing a product appearing to be substantially identical to the claimed invention, so the burden shifts to the applicant to shown an unobvious difference. See MPEP 2113. This can be shown by way of a declaration showing unexpected result comparing the fixing belt made by the process taught by Satoh and the fixing belt made using the defoaming step claimed.

In response to Applicant's argument that because Satoh fails to explicitly teach the method limitations of the claimed invention, it is not shown that the buckling strength, and tear strength is inherently taught in Satoh. Applicant's specification states that the thickness of the polyimide resin

Art Unit: 1772

object is the most influential factor determining the buckling strength (see applicant's specification p.5). Therefore, since the fixing belt of Satoh is formed of the same materials and has the same thickness it must provide the same properties of buckling strength and tear strength, unless the Applicant can show an unobvious difference. See MPEP 2112 V.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to

Art Unit: 1772

Christopher P. Bruenjes whose telephone number is 571-272-1489.

The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher P Bruenjes
Examiner

Art Unit 1772

CPB

September 22, 2006


ALICIA CHEVALIER
PRIMARY EXAMINER